

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-189. (Canceled)

190. (Currently amended) A filter media comprising a fine fiber layer having a basis weight of 0.0001 to 24 gm/m² and a melt blown substrate, the fine fiber comprising a polyvinyl alcohol polymer comprising the reaction product of a polyvinyl alcohol and a crosslinking agent, the fiber having a fiber size of about 0.01 to 0.5 micron, the substrate comprising a filtration medium; wherein after exposure to air at 140°F and 100% relative humidity for 1 to 16 hours at least 50% of the fine fiber remains substantially unchanged.

191. (Previously presented) The media of claim 190 wherein the fine fiber comprises a blend of two polyvinyl alcohol polymers and has a diameter of 0.01 to 0.5 micron.

192. (Previously presented) The media of claim 190 wherein the fine fiber has a diameter of 0.01 to 0.2 micron.

193. (Previously presented) The media of claim 190 wherein the media, when exposed to an air stream having a temperature of about 140°F and a relative humidity of about 100%, greater than about 50% of the fiber survives for more than 16 hours.

194. (Previously presented) The media of claim 190 wherein the substrate comprises a woven or non-woven substrate.

195. (Previously presented) The media of claim 194 wherein the non-woven substrate comprises a fiber selected from cellulose, glass, polymer, metal, and combinations thereof.

196. (Previously presented) The media of claim 190 wherein the substrate comprises spunbonded polymeric non-woven fabric.

197. (Previously presented) The media of claim 190 wherein the substrate comprises a non-woven polymeric fabric.

198. (Canceled)

199. (Currently amended) The filter media of claim ~~[[198]]~~190 wherein the crosslinking agent comprises urea formaldehyde, melamine formaldehyde, phenol formaldehyde, or mixtures thereof.

200. (Currently amended) The fine fiber of claim ~~[[198]]~~199 wherein the crosslinking agent comprises a dialdehyde, trialdehyde, tetraaldehyde, a diacid, a urethane reactant, epoxy reactant, or mixtures thereof.

201. (Currently amended) A filter media comprising a fine fiber layer having a fiber size of about 0.01 to 0.5 micron and a basis weight of 0.0001 to 24 gm/m² and a filtration substrate having a basis weight of about 8 to 200 grams/meter², the fine fiber comprising a polymer selected from the group consisting of:

(a) a blend of a hydrophobic additive and a nylon 66, the fine fiber having a fiber size of about 0.01 to 0.5 micron;

(b) a blend of a hydrophobic additive and a polymer comprising a blend of at least two different nylon polymers, the fine fiber having a fiber size of about 0.01 to 0.5 micron;

(c) a blend of a hydrophobic additive and a nylon polymer comprising a nylon other than a copolymer formed from a cyclic lactam and a C₆₋₁₀ diamine monomer or a C₆₋₁₀ diacid monomer, the fine fiber having a fiber size of about 0.01 to 0.5 micron; or

(d) mixtures thereof;

wherein after exposure to air at 140°F and 100% relative humidity for 1 to 16 hours at least 50% of the fine fiber remains substantially unchanged; the substrate comprising a filtration medium.

202. (Previously presented) The media of claim 201 wherein the fine fiber comprises a blend of two nylon polymers and has a diameter of 0.01 to 0.2 micron.

203. (Previously presented) The media of claim 201 wherein the fine fiber layer survives immersion in hot water at 140°F and at least 50% of the fiber survives after 5 minutes.

204. (Previously presented) The media of claim 201 wherein the media, when exposed to an air stream having a temperature of about 140°F and a relative humidity of about 100%, greater than about 50% of the fiber survives for more than 16 hours.

205. (Previously presented) The media of claim 201 wherein the substrate comprises a woven or non-woven substrate.

206. (Previously presented) The media of claim 205 wherein the non-woven substrate comprises a fiber selected from cellulose, glass, polymer, metal, and combinations thereof.

207. (Previously presented) The media of claim 201 wherein the substrate comprises spumbonded polymeric non-woven fabric.

208. (Previously presented) The media of claim 201 wherein the substrate comprises a non-woven polymeric fabric.

209-219. (Canceled)

220. (Currently amended) A filter media comprising a fine fiber layer having a fiber size of about 0.01 to 0.5 micron and a basis weight of 0.0001 to 24 gm/m² and a filtration substrate having a basis weight of about 8 to 200 grams/meter², the fine fiber comprising the reaction product of a polymer resin and a cross linking agent, ~~the fiber having a fiber size of about 0.01 to 0.5 micron, the substrate comprising a filtration media;~~ wherein after exposure to air at 140°F and 100% relative humidity for 1 to 16 hours at least 50% of the fine fiber remains substantially unchanged; ~~the substrate comprising a filtration medium.~~

221. (Previously presented) The media of claim 220 wherein the fine fiber comprises a blend of two polymer resins and has a diameter of 0.01 to 0.2 micron.

222. (Previously presented) The media of claim 220 wherein the media, when exposed to an air stream having a temperature of about 140°F and a relative humidity of about 100%, greater than about 50% of the fiber survives for more than 16 hours.

223. (Previously presented) The media of claim 220 wherein the substrate comprises a woven or non-woven substrate.

224. (Previously presented) The media of claim 223 wherein the non-woven substrate comprises a fiber selected from cellulose, glass, polymer, metal, and combinations thereof.

225. (Previously presented) The media of claim 220 wherein the substrate comprises spunbonded polymeric non-woven fabric.

226. (Previously presented) The media of claim 220 wherein the substrate comprises a non-woven polymeric fabric.

227. (Previously presented) The filter media of claim 220 wherein the crosslinking agent comprises urea formaldehyde, melamine formaldehyde, phenol formaldehyde, or mixtures thereof.

228. (Previously presented) The fine fiber of claim 220 wherein the crosslinking agent comprises a dialdehyde, trialdehyde, tetraaldehyde, a diacid, a urethane reactant, epoxy reactant, or mixtures thereof.

229. (Currently amended) A filter media comprising a fine fiber layer having a fiber size of about 0.01 to 0.5 micron and a basis weight of 0.0001 to 24 gm/m² and a filtration substrate having a basis weight of about 8 to 200 grams/meter², the fine fiber comprising an electrospun

fiber comprising the reaction product of a polymer resin and a crosslinking agent, ~~the substrate comprising a filtration media;~~ wherein after exposure to air at 140°F and 100% relative humidity for 1 to 16 hours at least 50% of the fine fiber remains substantially unchanged; ~~the substrate comprising a filtration medium.~~

230. (Previously presented) The media of claim 229 wherein the fine fiber comprises a blend of two polymer resins and has a diameter of 0.01 to ~~[[0.5]]~~ 0.2 micron.

231. (Previously presented) The media of claim 229 wherein the fine fiber has a diameter of 0.01 to 0.2 micron.

232. (Previously presented) The media of claim 229 wherein the media, when exposed to an air stream having a temperature of about 140°F and a relative humidity of about 100%, greater than about 50% of the fiber survives for more than 16 hours.

233. (Previously presented) The media of claim 229 wherein the substrate comprises a woven or non-woven substrate.

234. (Previously presented) The media of claim 233 wherein the non-woven substrate comprises a fiber selected from cellulose, glass, polymer, metal, and combinations thereof.

235. (Previously presented) The media of claim 229 wherein the substrate comprises spun bonded polymeric non-woven fabric.

236. (Previously presented) The media of claim 229 wherein the substrate comprises a non-woven polymeric fabric.

237. (Previously presented) The filter media of claim 229 wherein the crosslinking agent comprises urea formaldehyde, melamine formaldehyde, phenol formaldehyde, or mixtures thereof.

238. (Previously presented) The fine fiber of claim 229 wherein the crosslinking agent comprises a dialdehyde, trialdehyde, tetraaldehyde, a diacid, a urethane reactant, epoxy reactant, or mixtures thereof.

239 - 246. (Canceled)

247. (New) A filter media comprising a fine fiber layer having a fiber size of about 0.01 to 2 micron and a basis weight of 0.0001 to 24 gm/m², the layer having a thickness of about 1 to 100 times the fiber diameter, and a non-woven filtration substrate, the fine fiber layer comprising the reaction product of a polyurethane polymer and a crosslinking agent; wherein the fiber, when exposed to an air stream having a temperature of about 140°F and a relative humidity of about 100%, greater than about 50% of the fiber survives for more than 1-16 hours.

248. (New) The media of claim 247 wherein the fine fiber comprises a blend of two polymers and has a diameter of 0.01 to 0.5 micron.

249. (New) The media of claim 247 wherein the fine fiber has a diameter of 0.01 to 0.2 micron.

250. (New) The media of claim 247 wherein the fine fiber comprises about 0.1 to 40 wt% of the crosslinking agent.

251. (New) The media of claim 250 wherein the crosslinking agent comprises urea formaldehyde, melamine formaldehyde, phenol formaldehyde, or mixtures thereof.

252. (New) The media of claim 250 wherein the crosslinking agent comprises a dialdehyde, trialdehyde, tetraaldehyde, a diacid, a urethane reactant, epoxy reactant, or mixtures thereof.

253. (New) The media of claim 247 comprising a layer having a thickness of less than about 30 microns.

254. (New) The media of claim 247 comprising a layer having a thickness of less than about 20 microns.

255. (New) A filter media comprising a fine fiber layer having a fiber size of about 0.01 to 2 microns and a basis weight of 0.0001 to 24 gm/m², the layer having a thickness of about 1 to 100 times the fiber diameter, and a non-woven substrate, the fine fiber layer comprising a polyurethane polymer and a resinous additive comprising an oligomer having a molecular weight of about 500 to 3000 and an aromatic character; wherein the additive miscible in the polymer and wherein the fiber, when exposed to an air stream having a temperature of about 140°F and a relative humidity of about 100%, greater than about 50% of the fiber survives for more than 1-16 hours.

256. (New) The media of claim 255 wherein the fine fiber comprises a blend of two polymers and has a diameter of 0.01 to 0.5 micron.

257. (New) The media of claim 255 wherein the fine fiber has a diameter of 0.01 to 0.2 micron.

258. (New) The media of claim 255 wherein the fine fiber comprises about 0.1 to 40 wt% of the resinous additive.

259. (New) The media of claim 258 wherein the resinous additive comprises a phenolic oligomer.

260. (New) The media of claim 259 wherein the resinous additive comprises an oligomer comprising a t-butyl phenol.

261. (New) The media of claim 255 comprising a layer having a thickness of less than about 30 microns.

262. (New) The media of claim 255 comprising a layer having a thickness of less than about 20 microns.

263. (New) A filter media comprising a fine fiber layer having a fiber size of about 0.01 to 2 micron and a basis weight of 0.0001 to 24 gm/m², the layer having a thickness of about 1 to 100 times the fiber diameter, and a non-woven filtration substrate, the fine fiber layer comprising the reaction product of an addition polymer and a crosslinking agent; wherein the fiber, when exposed to an air stream having a temperature of about 140°F and a relative humidity of about 100%, greater than about 50% of the fiber survives for more than 1-16 hours.

264. (New) The media of claim 263 wherein the fine fiber comprises a blend of two polymers and has a diameter of 0.01 to 0.5 micron.

265. (New) The media of claim 263 wherein the fine fiber has a diameter of 0.01 to 0.2 micron.

266. (New) The media of claim 263 wherein the fine fiber comprises about 0.1 to 40 wt% of the crosslinking agent.

267. (New) The media of claim 266 wherein the crosslinking agent comprises urea formaldehyde, melamine formaldehyde, phenol formaldehyde, or mixtures thereof.

268. (New) The media of claim 266 wherein the crosslinking agent comprises a dialdehyde, trialdehyde, tetraaldehyde, a diacid, a urethane reactant, epoxy reactant, or mixtures thereof.

269. (New) The media of claim 263 comprising a layer having a thickness of less than about 30 microns.

270. (New) The media of claim 263 comprising a layer having a thickness of less than about 20 microns.

271. (New) A fiber media comprising a fine fiber layer having a fiber size of about 0.01 to 2 micron and a basis weight of 0.0001 to 24 gm/m², the layer having a thickness of about 1 to 100 times the fiber diameter and a non-woven filtration substrate, the fine fiber layer the reaction product of a condensation polymer and a crosslinking agent; wherein the fiber, when exposed to an air stream having a temperature of about 140°F and a relative humidity of about 100%, greater than about 50% of the fiber survives for more than 1-16 hours.

272. (New) The media of claim 271 wherein the fine fiber comprises a blend of two polymers and has a diameter of 0.01 to 0.5 micron.

273. (New) The media of claim 271 wherein the fine fiber has a diameter of 0.01 to 0.2 micron.

274. (New) The media of claim 271 wherein the fine fiber comprises about 0.1 to 40 wt% of the crosslinking agent.

275. (New) The media of claim 274 wherein the crosslinking agent comprises urea formaldehyde, melamine formaldehyde, phenol formaldehyde, or mixtures thereof.

276. (New) The media of claim 274 wherein the crosslinking agent comprises a dialdehyde, trialdehyde, tetraaldehyde, a diacid, a urethane reactant, epoxy reactant, or mixtures thereof.

277. (New) The media of claim 271 comprising a layer having a thickness of less than about 30 microns.

278. (New) The media of claim 271 comprising a layer having a thickness of less than about 20 microns.